

RAW SEQUENCE LISTING

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Application Serial Number: 10/725,829A
Source: 1Fw/6
Date Processed by STIC: 12/19/05

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RAW SEQUENCE LISTING

DATE: 12/19/2005

PATENT APPLICATION: US/10/725,829A

TIME: 08:58:38

Input Set : A:\V9661043.app

Output Set: N:\CRF4\12192005\J725829A.raw

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3 <110> APPLICANT: CHYE, MEE LEN
4     XU, ZENG-FU
5     SIN, SUK-FONG
7 <120> TITLE OF INVENTION: GENTICALLY MODIFIED PLANTS EXPRESSING PROTEINASE
8     INHIBITORS, SAPIN2A OR SAPIN2B, AND METHODS OF USE
9     THEREOF FOR THE INHIBITION OF TRYPSIN- AND
10    CHYMOTRYPSIN-LIKE ACTIVITIES
12 <130> FILE REFERENCE: V9661.0043
14 <140> CURRENT APPLICATION NUMBER: 10/725,829A
15 <141> CURRENT FILING DATE: 2003-12-01
17 <150> PRIOR APPLICATION NUMBER: 60/429,992
18 <151> PRIOR FILING DATE: 2002-11-29
20 <160> NUMBER OF SEQ ID NOS: 17
22 <170> SOFTWARE: PatentIn version 3.3
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 529
26 <212> TYPE: DNA
27 <213> ORGANISM: Solanum americanum
29 <400> SEQUENCE: 1
30 cataatggct gttcacaaag ttagcttccct tgcttgcccta cttgttcttg gatggatgtt      60
31 tctacttgcg aaacatgttg atgccaaaggc ttgtactaga gaatgtggtc atttttagcta      120
32 tggcatatgc ccacgttcag aaggaagtcc ccaaaaacct atatgcacca attgttgctc      180
33 aggctataag ggttgcaact attacagtgc taaaggagat ttgatttggtg aaggagaatc      240
34 tgaccctaga aaccacaaaag attgtacctt cgaatgtgat acacagattg cttattcaaa      300
35 atgtcctcgt tcagaaggaa agatgataat taaaccacct ggatgcacca cttgttgcac      360
36 gggctatcag ggttgctact atttcgatca agatgggtgat tttgtctgtg aaggagagag      420
37 tcctgaaccc aagaccactg cttattttcta atcaatcata tgttggttatc tatcaaaaaa      480
38 aaatatgtat gcatgatata tgctgggttac tgtaatgtgg actttattg      529
41 <210> SEQ ID NO: 2
42 <211> LENGTH: 148
43 <212> TYPE: PRT
44 <213> ORGANISM: Solanum americanum
46 <400> SEQUENCE: 2
47 Met Ala Val His Lys Val Ser Phe Leu Ala Cys Leu Leu Val Leu Gly
48 1          5          10          15
50 Trp Met Phe Leu Leu Ala Lys His Val Asp Ala Lys Ala Cys Thr Arg
51          20          25          30
53 Glu Cys Gly His Phe Ser Tyr Gly Ile Cys Pro Arg Ser Glu Gly Ser
54          35          40          45
56 Pro Gln Lys Pro Ile Cys Thr Asn Cys Cys Ser Gly Tyr Lys Gly Cys
57          50          55          60
59 Asn Tyr Tyr Ser Ala Lys Gly Asp Leu Ile Cys Glu Gly Glu Ser Asp
60 65          70          75          80

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62 Pro Arg Asn Pro Lys Asp Cys Thr Phe Glu Cys Asp Thr Gln Ile Ala
63                               85                               90                               95
65 Tyr Ser Lys Cys Pro Arg Ser Glu Gly Lys Met Ile Ile Lys Pro Thr
66                               100                              105                              110
68 Gly Cys Thr Thr Cys Cys Thr Gly Tyr Gln Gly Cys Tyr Tyr Phe Asp
69                               115                              120                              125
71 Gln Asp Gly Asp Phe Val Cys Glu Gly Glu Ser Pro Glu Pro Lys Thr
72                               130                              135                              140
74 Thr Ala Tyr Phe
75 145
78 <210> SEQ ID NO: 3
79 <211> LENGTH: 692
80 <212> TYPE: DNA
81 <213> ORGANISM: Solanum americanum
83 <400> SEQUENCE: 3
84 gaagataatt aatcacgatac gagaaagaat aaatggctgt tcacaaagaa gttagttccc      60
85 ttgcttacct acttggttctt ggattaatgt ttctacatgt aagcgcggta aaacatgttg      120
86 atgccaaagcc atgtacaaga gaatgtggta atcttgggta tggaatatgc ccgcgttcag      180
87 aaggaagtcc ggaaaatccc atatgcacga attgttgctc aggctataaa ggttgcaact      240
88 attatagtgc taatgggact tttatttgcg aaggaagttc tgaccctaaa aacccaaata      300
89 cttgccctt attttgtgat ggagatattg cctattcaaa atgtccccgt tcagaaggag      360
90 agactataat atatcccacg ggatgcacca cctgttgcac ggggtacaag ggttgctact      420
91 attttagtaa agaaggtgag tttgtgtgtg aaggagagag tgatgaacct aacgttattt      480
92 ctaatcaatg aaatgcgttg tagtttttaa tataatgtat gaaataaaaag tatgcagtac      540
93 ggcaatatat gataatcact atagtgtggg catcacagtt gtgctttata tgtaattact      600
94 aattatctga ataagagaaa aagatcatcc atgaggactt ggctcctctc cagtagtggt      660
95 gatctccttc ctaaaaaaaaa aaaaaaaaaa aa      692
98 <210> SEQ ID NO: 4
99 <211> LENGTH: 152
100 <212> TYPE: PRT
101 <213> ORGANISM: Solanum americanum
103 <400> SEQUENCE: 4
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107 Gly Leu Met Phe Leu His Val Ser Ala Val Lys His Val Asp Ala Lys
108                               20                               25                               30
110 Pro Cys Thr Arg Glu Cys Gly Asn Leu Gly Tyr Gly Ile Cys Pro Arg
111                               35                               40                               45
113 Ser Glu Gly Ser Pro Glu Asn Pro Ile Cys Thr Asn Cys Cys Ser Gly
114                               50                               55                               60
116 Tyr Lys Gly Cys Asn Tyr Tyr Ser Ala Asn Gly Thr Phe Ile Cys Glu
117 65                               70                               75                               80
119 Gly Ser Ser Asp Pro Lys Asn Pro Asn Thr Cys Pro Leu Phe Cys Asp
120                               85                               90                               95
122 Gly Asp Ile Ala Tyr Ser Lys Cys Pro Arg Ser Glu Gly Glu Thr Ile
123                               100                              105                              110
125 Ile Tyr Pro Thr Gly Cys Thr Thr Cys Cys Thr Gly Tyr Lys Gly Cys
126                               115                              120                              125
128 Tyr Tyr Phe Ser Lys Glu Gly Glu Phe Val Cys Glu Gly Glu Ser Asp

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129      130      135      140
131 Glu Pro Asn Val Ile Ser Asn Gln
132 145      150
135 <210> SEQ ID NO: 5
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138 <213> ORGANISM: Artificial Sequence
140 <220> FEATURE:
141 <223> OTHER INFORMATION: Description of artificial sequence: Synthetic
142     primer
144 <400> SEQUENCE: 5
145 ctccatcaca aaataagggg caagta 26
148 <210> SEQ ID NO: 6
149 <211> LENGTH: 21
150 <212> TYPE: DNA
151 <213> ORGANISM: Artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: Description of artificial sequence: Synthetic
155     primer
157 <400> SEQUENCE: 6
158 gctcgaagac gatcagatac c 21
161 <210> SEQ ID NO: 7
162 <211> LENGTH: 21
163 <212> TYPE: DNA
164 <213> ORGANISM: Artificial Sequence
166 <220> FEATURE:
167 <223> OTHER INFORMATION: Description of artificial sequence: Synthetic
168     primer
170 <400> SEQUENCE: 7
171 agaaagagct ctcatgtctgt c 21
174 <210> SEQ ID NO: 8
175 <211> LENGTH: 11
176 <212> TYPE: PRT
177 <213> ORGANISM: Artificial sequence
179 <220> FEATURE:
180 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
181     peptide corresponding to amino acids 77-87 of
182     SaPIN2a
184 <400> SEQUENCE: 8
185 Gly Glu Ser Asp Pro Arg Asn Pro Lys Asp Cys
186 1      5      10
189 <210> SEQ ID NO: 9
190 <211> LENGTH: 14
191 <212> TYPE: PRT
192 <213> ORGANISM: Artificial sequence
194 <220> FEATURE:
195 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
196     peptide corresponding to amino acids 139-152
197     of SaPIN2b

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199 <400> SEQUENCE: 9
200 Cys Glu Gly Glu Ser Asp Glu Pro Asn Val Ile Ser Asn Gln
201 1 5 10
204 <210> SEQ ID NO: 10
205 <211> LENGTH: 25
206 <212> TYPE: DNA
207 <213> ORGANISM: Artificial Sequence
209 <220> FEATURE:
210 <223> OTHER INFORMATION: Description of artificial sequence: Synthetic
211 primer
213 <400> SEQUENCE: 10
214 caatcccact atccttcgca agacc 25
217 <210> SEQ ID NO: 11
218 <211> LENGTH: 29
219 <212> TYPE: DNA
220 <213> ORGANISM: Artificial Sequence
222 <220> FEATURE:
223 <223> OTHER INFORMATION: Description of artificial sequence: Synthetic
224 primer
226 <400> SEQUENCE: 11
227 gtctatatta tactgttaaa taacaagcc 29
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231 <211> LENGTH: 56
232 <212> TYPE: DNA
233 <213> ORGANISM: Artificial Sequence
235 <220> FEATURE:
236 <223> OTHER INFORMATION: Description of artificial sequence: Synthetic
237 primer
239 <400> SEQUENCE: 12
240 gagaatccac catggctcat catcatcatc atcatatggc tgttcacaaa gttagc 56
243 <210> SEQ ID NO: 13
244 <211> LENGTH: 27
245 <212> TYPE: DNA
246 <213> ORGANISM: Artificial Sequence
248 <220> FEATURE:
249 <223> OTHER INFORMATION: Description of artificial sequence: Synthetic
250 primer
252 <400> SEQUENCE: 13
253 gagcggccgc ttagaaataa gcagtgg 27
256 <210> SEQ ID NO: 14
257 <211> LENGTH: 21
258 <212> TYPE: DNA
259 <213> ORGANISM: Artificial Sequence
261 <220> FEATURE:
262 <223> OTHER INFORMATION: Description of artificial sequence: Synthetic
263 primer
265 <400> SEQUENCE: 14
266 cgatacttcg gcgataaccg c 21
269 <210> SEQ ID NO: 15

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Input Set : A:\V9661043.app

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270 <211> LENGTH: 78
 271 <212> TYPE: DNA
 272 <213> ORGANISM: Artificial Sequence
 274 <220> FEATURE:
 275 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
 276 oligonucleotide
 278 <400> SEQUENCE: 15
 279 tcatttggag agaacacggg ggactctaga ggatccccc tgcaggaatt cgcggccgcg 60
 280 tcgaccataa tggctgtt 78
 283 <210> SEQ ID NO: 16
 284 <211> LENGTH: 5
 285 <212> TYPE: PRT
 286 <213> ORGANISM: Artificial Sequence
 288 <220> FEATURE:
 289 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
 290 peptide
 292 <400> SEQUENCE: 16
 293 His His His His His
 294 1 5
 297 <210> SEQ ID NO: 17
 298 <211> LENGTH: 5
 299 <212> TYPE: PRT
 300 <213> ORGANISM: Artificial Sequence
 302 <220> FEATURE:
 303 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
 304 peptide
 306 <400> SEQUENCE: 17
 307 Gly Val Gly Val Pro
 308 1 5

VERIFICATION SUMMARY

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